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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,172	06/09/2000	David Wallman	SUN1P270/P4566	3517

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EXAMINER	
SHAH, NILESH R	
ART UNIT	**PAPER NUMBER**
2127	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/591,172	WALLMAN, DAVID	
	Examiner	Art Unit	
	Nilesh R Shah	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/13/04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Nilsen et al (6,081,665) (hereinafter Nilsen).

4. As per claim 1 Nilsen teaches a computing system, the computing system including:

   a processor; a memory; and a virtual machine which is in communication with the processor (col. 5 lines 30 –65, col. 35 lines 30 -35).

   the virtual machine being arranged to enable two or more jobs to run thereon, wherein the virtual machine is arranged to create a heap in the memory for each job that runs on the virtual machine. (col. 5 lines 38- 43) (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

5. As per claim 2, Nilsen teaches a computing system wherein the virtual machine is scaleable (col. 37 line 15 – col. 38 line 11).

6. As per claim 3, Nilsen teaches a computing system wherein the virtual machine includes a jobs manager, a class manager, and a heap manager. (col. 37 line 15 – col. 38 line 11).

7. As per claim 4, Nilsen teaches a computing system wherein the heap manager manages substantially all heaps in the memory that are created by the virtual machine. (col. 20 line 15 – col. 21 line 44).

8. As per claim 5, Nilsen teaches a computing system wherein the heap manager is arranged to allow an object allocated on a first heap created by the virtual machine to be visible to a second heap created by the virtual machine. (col. 20 line 15 – col. 21 line 44).

9. As per claim 6, Nilsen teaches a computing system wherein the heap manager uses an object router to exchange data between the first heap and the second heap. (col. 20 line 15 – col. 21 line 44).

10. As per claim 7, Nilsen teaches a computing system wherein the class manager is arranged to enable a class associated with the virtual machine to be shared by the one or more jobs that are arranged to run on the virtual machine (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

11. As per claim 8, Nilsen teaches a computing system wherein the virtual machine is further arranged to enable information to be exchanged between the one or more jobs that are arranged to be run on the virtual machine (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

12. As per claim 9, Nilsen teaches a computing system the virtual machine is created using the Java programming language (col. 12 lines 22- 55).

13. As per claim 10 Nilsen teaches a computing system the virtual machine is associated with a system heap, and the virtual machine is further arranged to create a system garbage collector, the system garbage collector being arranged to perform garbage collection on the system heap. (Fig 2, Fig. 32, col. 45 line 39 – col. 44 line 43).

14. As per claim 11, Nilsen teaches a computing system wherein the virtual machine is further arranged to create an incremental garbage collector for each heap created in the memory, the incremental garbage collector for each heap being arranged to perform garbage collection on its associated heap. (Fig 2, Fig. 32, col. 45 line 39 – col. 44 line 43).

15. As per claim 12, Nilsen teaches a computing system wherein the one or more jobs are arranged to execute substantially concurrently (col. 37 line 15 – col. 38 line 11) (col. 35 lines 5-53).

16. As per claim 13, Nilsen teaches a virtual machine arranged to operate in cooperation with a computing system, the virtual machine including: a first mechanism for creating a first job and a second job, the first job and the second job being arranged to run with respect to the virtual machine; a second mechanism, the second mechanism being arranged to provide the at least one job with at least one class that is arranged to be shared between the first job and the second job; and a third mechanism, the third mechanism being

arranged to exchange information between the first job and the second job. (col. 37 line 15 – col. 38 line 11) (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

17. As per claim 14, Nilsen teaches a virtual machine wherein the first mechanism is further arranged to create a first heap associated with the first job and a second heap associated with the second job, and the third mechanism is further arranged to increase a size of the first heap and to decrease a size of the second heap (Fig 2, Fig. 32, col. 45 line 39 – col. 44 line 43).

18. As per claim 15, Nilsen teaches a virtual machine further including a first garbage collector and a second garbage collector, wherein the first garbage collector is arranged to perform a garbage collection on the first heap and the second garbage collector is arranged to perform a garbage collection on the second heap (Fig 2, Fig. 32, col. 45 line 39 – col. 44 line 43).

19. As per claim 16, Nilsen teaches a virtual machine wherein the size of the first heap and the size of the second heap may be dynamically altered (col. 42 line 35 – col. 43 line 20).

20. As per claim 17, Nilsen teaches a virtual machine wherein the second mechanism is further arranged to share the at least one class between the first job and the second job (col. 14 line 15 –col.16 line 44).

21. As per claim 18, Nilsen teaches a virtual machine wherein at least one of the first job and the second job includes data which is persisted (col. 37 line 15 – col. 38 line 11) (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

22. As per claim 19 Nilsen teaches a computer-implemented method for executing a first application substantially concurrently with a second application, the computer-implemented method comprising:

creating a first job on a virtual machine, the first job being associated with the first application, creating a second job on the virtual machine, the second job being associated with the second application (col. 37 line 15 – col. 38 line 11) (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53)

creating a first heap, the first heap being associated with the first job; and creating a second heap, the second heap being associated with the second job (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

23. As per claim 20, Nilsen teaches a computer-implemented method wherein the first job and the second job share at least one class (col. 14 line 15 –col.16 line 44).

24. As per claim 21, Nilsen teaches a computer-implemented method wherein the first application and the second application both executed substantially simultaneously (col. 37 line 15 – col. 38 line 11) (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

25. As per claim 22, Nilsen teaches a computer system, the computing system including

at least one processor a memory (col. 5 lines 30-65, col. 35 lines 30-35);

and a virtual machine which is in communication with the processor, the virtual machine being arranged to enable two or more jobs to run concurrently (col. 5 lines 38- 43) (col. 20 line 15 – col. 21 line 44) (col. 35 lines 5-53).

Response to Arguments

26. Applicant's arguments filed on 12/16/04 have been fully considered but they are not persuasive.

27. Applicant states (1) Nilsen does not teach a virtual machine that can support two jobs, (2) a virtual machine also arranged to create a heap in memory for each job that runs on the virtual machine.

28. Examiner respectfully disagrees with applicant's arguments.

    a. As to point (1) Nilsen clearly teaches the use of virtual machine that can support two jobs (col. 5 lines 38-43, col. 35 lines 30-35).

    b. As to point (2) Nilsen clearly teaches the use of a virtual machine arranged to create a heap in the memory for each job that runs on the virtual machine (col. 20 lines 50-64, col. 25 lines 5-15).

Conclusion

29. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

    A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh R Shah whose telephone number is 703-305-8105. The examiner can normally be reached on Monday-Friday 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NS
April 26, 2004

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